

Math 1613 - Trigonometry

Quiz #8 - 2011.09.13

Solutions

1. What is the difference between angular speed and linear speed?

Angular speed measures the change in angle over time, while linear speed measures the change in distance over time.

2. Find all values of $\theta \in [0, 2\pi)$ such that $\cos(\theta) = -\frac{1}{2}$.

We know that $\cos(60^\circ) = \frac{1}{2}$, so this is our reference angle. The first angle will be $180^\circ - 60^\circ$, while the second will be $180^\circ + 60^\circ$. Converting these angles to radian measure gives $\theta = \frac{2}{3}\pi$ and $\theta = \frac{4}{3}\pi$.